

REMARKS

Claims 26-58 are pending. Claims 26-39, 47, and 49-57 are withdrawn. Claims 40-46, 48, and 58 are rejected. Claims 40 and 58 are amended to clarify the method, supported at least at p. 8 lines 16-20 and p. 9 lines 11-12, thus introducing no new matter.

Applicants respectfully request reconsideration as follows.

CLAIM REJECTIONS UNDER 35 U.S.C. §112

Claims 40-46, 48 and 58 are rejected under 35 U.S.C. 112 ¶2 as indefinite. Applicants have amended independent claims 40 and 58 to overcome the rejection and respectfully request its withdrawal.

Claims 40-46, 48, and 58 are rejected under 35 U.S.C. 112 ¶2 as not described because of new matter. Applicants have amended independent claims 40 and 58 to overcome the rejection and respectfully request its withdrawal.

Claims 40-46, 48, and 58 are rejected under 35 U.S.C. 112 ¶2 as not described.

The Examiner states

The claims encompass the detection of any of the many different nucleic acids wherein the nucleic acid sequence is correlated with a graft reaction. Nucleic acids of such a large genus have not been taught by the specification.

The Examiner states that the methods comprise "any subject as well as human".

The amended claims clarify that the method compares SEQ ID NO. 7 in the sample to a control. SEQ ID NO. 7 is not "any nucleic acid sequence". Amended claims 40 and 58 recite a human. A human is not "any subject". For at least these reasons, a person of ordinary skill in the art can reasonably conclude the inventors had possession of their invention at the time of filing, and thus claims 40-46, 48, and 58 are sufficiently described. MPEP §2163.06

Claims 40-46, 48, and 58 are rejected under 35 U.S.C. 112 ¶1 as not enabled. The Examiner states that the claims encompass "any patient, human and non-human", "any type of graft reaction", "any increase or decrease level of SEQ ID NO. 7 detection", and "any nucleic acid sequence".

Applicants respectfully assert that the claims communicate the invention to the public in a meaningful way with such particularity as to enable any person skilled in the pertinent art or science to make and use the invention without involving extensive experimentation. MPEP §608.01(g). As described above, the amended claims are limited to a human patient and to SEQ ID NO. 7.

The Examiner asserts that the claims are not enabled with respect to type of graft reaction and the corresponding increase or decrease of SEQ ID NO. 7 because

the specification teaches that rejection reaction, course of rejection, and rejection crisis is detected by an increased level of nucleic acid (see pg. 12 lines 16-30) and teaches that tolerance and course of tolerance is detected by an increased level of nucleic acid (see pg. 13 lines 13-28).

The Examiner's citation for the rejection reaction, the course of rejection, and the rejection crisis is only directed to SEQ ID NO. 1 and SEQ ID NO. 2 and not to the recited SEC ID NO. 7. The

correlation between level of SEQ ID NO. 7 and graft reaction is described on p. 13 line 13 to p. 14 line 6. An increased level of SEQ ID NO. 7, compared to a control level, indicates tolerance or the course of tolerance, that the expression of T8 (SEQ ID NO. 7) is highly expressed in grafts of tolerance-developing receptor animals (p. 21 lines 15-18), and that T8 is drastically decreased at the time of rejection (p. 18 lines 27-29). Thus, the specification describes that a stably high expression in SEQ ID NO. 7 is predictive of tolerance, and a reduced SEQ ID NO. 7 expression is predictive of graft rejection.

The Examiner states

the specification does not provide statistically significant data that predictably determines that a change in expression of SEQ ID NO. 7 is predictive of graft reaction in any subject.

As the attached Declaration under 37 CFR §1.132 explains, an increased or decreased level of SEQ ID NO. 7 correlates with the presence of the graft reaction. The extent of the graft reaction, either rejection or tolerance, is based on the extent of the increase or decrease over a control, based on statistical analysis. Thus, Applicants respectfully assert that a person having ordinary skill in the art would recognize the relationship between the level of SEQ ID NO. 7 as compared to a control level, and the graft reaction.

The Examiner states

the specification does not provide any guidance that would allow the skilled artisan to detect SEQ ID NO. 7, which is a rat cDNA in human nor provide any guidance as to what sequences are functional homologues of SEQ ID No. 7.

The Examiner acknowledges that it is "within the skill of the art to determine homologous mRNA sequences in related species". Additionally, functionally analogous sequences are described as those sequences having the same effect, e.g., functionally analogous sequences in other organisms, and the detection of analogs in human patients (p. 5 line 24 to p. 6 line 7). Thus, Applicants respectfully assert that a person having ordinary skill in the art would be enabled to perform the claimed method in a human, based on the description provided.

For at least the above reasons, as well as those presented in the accompanying Declaration, Applicants respectfully assert that claims 40-46, 48, and 58 are enabled and respectfully request withdrawal of the rejection.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claims 40-41, 43-45, 48 and 58 are rejected under 35 U.S.C. 102(b) as anticipated by Charpin.

The Examiner states

It is noted that claims do not require the detection of the sequence set forth in the sequence listing as SEQ ID NO. 7 as the claims recite that "wherein SEQ ID NO. 7 is at least one nucleic acid molecule selected from the group consisting of (a) a nucleic acid molecule or its complementary nucleotide sequence" and therefore the claims merely require detecting a nucleic acid molecule, which is anticipated by Charpin.

Applicants respectfully disagree. The claims recite "a level of SEQ ID NO. 7 is determined in the sample", thus, the claims do require detecting SEQ ID NO. 7. Claims 40-41, 43-45, 48, and 58 thus are not anticipated by Charpin, at least because Charpin discloses that increased expression of TGF- β , not SEQ ID NO. 7, is associated with graft reactions. Charpin does not disclose SEQ ID NO. 7, and thus cannot anticipate. Applicants respectfully request withdrawal of the rejection.

CONCLUSION

Applicants believe the application is in condition for allowance. Fees for time extensions and to Request Continued Examination are being simultaneously paid by Electronic Funds Transfer. The Office is authorized to charge any other fees deemed necessary to Deposit Account No. 20-0809.

The Examiner is invited to contact Applicants' undersigned representative with questions.

Respectfully submitted,
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